OIPE JC185
MAY 3 1 2005
PATENT & TRADEMARK OFFICE

PATENT

I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

May 26, 2005
Date

Ayesha J. Shaikh

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Doug Rollins	Attorney Docket No.	: 500964.01
Serial No.	: 09/932,241	Group Art Unit	: 2144
Filed	: August 17, 2001	Examiner	: Olga Hernandez
Title	: NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1. 131

Sir:

I, Kimton N. Eng, do hereby declare as follows:

1. I am attorney of record for U.S. Patent Application No. 09/932,241, filed August 17, 2001.

2. I have reviewed U.S. Patent Application Publication No. 20020053044 to Gold *et al.* (the "Gold application"), having a publication date of May 2, 2002, and a U.S. filing date of April 27, 2001.

3. The invention recited in at least claims 1, 11, 16, 25, 34, 37, and 44 of the present application, was conceived in the U.S. prior to the April 27, 2001 filing date of the Gold application.

4. As evidence of the conception of the claimed invention, I attach hereto Exhibit A.

5. Exhibit A is a redacted version of an invention disclosure form that was submitted prior to April 27, 2001, for review and consideration for a patent application. The dates have been marked out in the copy sent to the U.S. Patent and Trademark Office.

6. The invention disclosure form includes, among other things, a brief description of the invention, a description of advantages such an invention has over the previous technology, and a functional block diagram of an embodiment of the invention.

BEST AVAILABLE COPY

7. The functional block diagram of the invention disclosure form is similar to the drawing included in the present application as Figure 3, and illustrates various functional blocks included in a network computer according to an embodiment of the invention.

8. The functional block diagram illustrates functional blocks of the network computer recited in claim 1 of the present application. For example, the functional block illustrates a CPU, a flash read-only-memory ("ROM"), Ethernet and modem logic, and a mass storage object shown as storing user preferences and user data.

9. The functional block diagram also illustrates functional blocks of the network computer recited in claims 11, 16, 25, 34, and 37, and functional blocks of the method recited in claim 44.

10. The invention was constructively reduced to practice when the present application was filed on August 17, 2001.

11. Based on information and belief, the inventor, Mr. Doug Rollins, and the patent attorney, Paul F. Rusyn, worked diligently from a time prior to April 27, 2001 to the filing of the present application on August 17, 2001. As reflected in Mr. Rusyn's notes in the file, in preparing the patent application he reviewed the invention disclosure form (Exhibit A), had a meeting with Mr. Rollins to discuss the subject matter of the invention disclosure form, and drafted a patent application, which was then provided to Mr. Rollins for his review.

12. An inventor Declaration and an assignment of interests to Micron Technology, Inc., were signed by Mr. Rollins on July 24, 2001 (both attached as Exhibit B). An election under 37 C.F.R. 3.71 and 3.73(b) and power of attorney was signed by Mr. Michael L. Lynch, Chief Patent Counsel for assignee on August 3, 2001 (attached as Exhibit C).

13. The patent application was filed by Mr. Rusyn on August 17, 2001 with the documents attached hereto as Exhibits B and C.

14. The Gold application is removed as prior art because the invention was conceived prior to the April 27, 2001 filing date of the Gold application and diligently reduced to practice thereafter.

15. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that the making of willfully false statements and the like is punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and may jeopardize the validity of any patent issuing thereon.

May 26, 2005
Date

Kimton N. Eng

EXHIBIT
A

MICRON ELECTRONICS

INVENTION DISCLOSURE FORM

1. INVENTOR(S)

(a) Doug Rollins [redacted]

2. DESCRIPTION

File

2.1 Title of invention

Sub PC

2.2 What is the problem to be solved by your invention?

As the Internet becomes more pervasive it is attracting new "customers" whose needs are not met by current products. These users may be less technically skilled but still require the ability to attach a broadband connection, store and forward large amounts of data, and be able to easily manage their connection device. They want their access device to be small, simple, and easily supported (or require no support at all).

2.3 How did others solve the problem prior to your invention (If known)? (Describe the "prior art.") Why are these solutions non-optimal? Provide copies of any known "prior art."

In the current Internet connection marketplace, there are two choices (with varying degrees of sophistication and features): the conventional PC and the Internet Appliance.

The full-featured PC: *A full-featured PC usually consists of the following: CPU, memory, and associated logic circuits; rotary magnetic fixed and optical removable storage system; display system; connection sub-system; and operating software (the Operating System or "OS") to allow the systems to interact. Historically such operating software can be loaded by the end user, is relatively complex to install, configure, and support, and is usually far more than the end user requires.*

This solution is non-optimal due to the excessive cost, complexities in its configuration and support. Conventional Operating Systems go through a multi-step boot process wherein a variety of misconfigurations can result in a non-functional device. Acts as simple as deleting one character in an essential file can bring the entire system down.

In order to restore function a contact to service staff often results in a lengthy, involved, complex process to reload the Operating System to restore function.

This user often purchases the full-featured PC (over the Internet Appliance – discussed below) in order to access high data rate Internet connections as well as have the ability to download large multi-media files for viewing later. However, the PC is overkill for these customers. They neither need nor want the "extras" that come with it (the ability to radically alter the Operating System, add their own hardware peripherals, and configuration and support issues that accompany these).

The Internet Appliance (IA) is a broadly used term describing simple "portals" to the Internet. These devices usually consist of a CPU, memory, and associated logic circuits; a display system; flash ROM for long-term storage (usually in a very limited quantity); a simple (usually dial-up) connection mechanism. Their benefits lie primarily in their low cost and ease of use. The Operating System is embedded (run from ROM) such that misconfigurations are minimized. These devices are inexpensive and very simple to operate and support. Should the user misconfigure the system to the point where it will not connect, they can press a "reset" button to restore the embedded Operating System to factory defaults (and original operation).

This solution is non-optimal for several reasons. The long-term storage system (usually flash ROM) is quite small (rarely exceeding 64Mb) and their Internet connection options are quite limited to either dial-up or, in very rare cases, dedicated broadband connections. Due to the very small quantity of flash ROM, the user is unable to download and store large data files. The dial-up connection also limits this ability. Many such devices are dedicated to specific ISPs – for example the MSN Web Companion. The Web Companion is a simple device: WindowsCE and dial-up access to MSN. The user's choices are limited and flexibility non-existent.

2.4 Provide a hardware block diagram of your invention. Also, describe how the hardware components of your invention are coupled together. Please include an assembly drawing if it is available. (If your invention is a pure software invention, then disregard this question.)

Attached.

Embedded OS (1) can be any Operating System designed to run from ROM (2) that can address a PCI bus (17) via PCI logic (18), an IDE bus (7) via IDE logic (4), and modem controller logic (6). (1), (2), and (3) along with any display interface neither specified nor typically relevant) are similar to a conventional Internet Appliance.

Using IDE logic (4) and IDE bus (7), storage object (11) can be accessed by (1). As shown, (11) is subdivided into User Data space (10) and User Preferences space (12). User preferences space is a hidden partition used to store user settings outside the OS. Such preferences may include favorite web sites, background images, update routines, automation, spell check dictionaries and any other device settings that are neither universal (that is, constant across all such devices) nor contained within the OS. User

Data space is a visible partition used to store user files (accessed via (1)). Such files may include (but not be limited to) E-Mail and its attachments, large graphics downloaded from the Internet (14), multi-media objects, and the like.

Preferences Reset (15) is a momentary contact switch that performs a quick format on the User Preferences partition (12). This switch is used to restore all preferences to factory default. It may be used by the end user or by Support.

Data Reset (16) is also a momentary contact switch that performs a quick format on the User Data partition (10) to delete all user-stored files. This switch may be used by the end user to blank the data storage space or by Support.

OS Reset (19) will reset the embedded OS to factory defaults.

Note: (15), (16), and (19) operated independently. That is, pressing (16) will not affect the user preferences nor the OS. In each case, a User Interface warning message should appear prior to executing the function.

Ethernet logic (5) addresses conventional 10baseT Ethernet. This logic allows an Ethernet connection at RJ-45 jack (8). All TCP/IP and network settings may be stored in (1) and (2) or (12). The end user may connect any broadband bridge or router (such as xDSL or cable modems) (13) to jack (8). PPPoE is supported in (5) to allow connections to carrier services/ISPs requiring PPPoE clients. (8) then connects to Internet (14) by conventional means.

Modem Logic (6) is designed to allow v.90 (or other appropriate protocol) connections to (14) via POTS/PSTN (Plain Old Telephone System/Public Switched Telephone Network) using jack (9). Modem logic can be controller, controller-less, or soft depending on (1), (3), and user requirements.

2.5 Provide a flow chart of the steps performed by your invention. Also, describe how your invention operates.

See above.

2.6 Describe the advantages of your invention.

1. *By running an embedded OS, user configuration mistakes are readily fixed by resetting the device.*
2. *Since the device uses conventional rotary magnetic storage media their preferences, custom settings, and data files are preserved after system reset.*
3. *User preferences are stored on a dedicated partition on the storage media. This enables preferences to be retained if all stored data is deleted. Likewise,*

preferences can be restored to factory default preserving user data files.

4. *The single bus connector (currently PCI) allows the user to add a single supported device (such as a second Ethernet card). Adding such a device and loading a software router would transform the invention into a more full featured router. Local mass storage allows the device to provide web-caching functions. Adding a USB connection (provided USB is supported by the OS) allows easy attachment of a legacy-free printer.*

5. *Single-button reset features ensure easy support: "Reset System" restores the OS to factory defaults leaving user preferences and data intact, "Reset Preferences" deletes current application and appearances preferences while keeping the OS and user data files intact, "Data Delete" performs a quick format of the hard drive (deleting all user files in one step) while preserving the OS and current preferences ("look and feel") of the device.*

6. *Lightweight (embedded) OS runs on low-cost, low-power processors.*

7. *Integrated 10/100 Ethernet connection allows system to support current and future broadband connections via external modem (such as cable or xDSL). Furthermore, issues relating to ISP or carrier service network compatibility are non-existent: the devices uses the ISP or carrier service supplied connection device. Only after this device converts the broadband signal to Ethernet does this invention attach to the network.*

8. *PPPoE support in the OS provides additional flexibility (many carrier services require PPPoE support).*

3. CONCEPTION OF INVENTION

3.1 Identify the date when you first conceived the invention. (If not sure, give the earliest date of which you are sure.)

[redacted]

3.2 To whom was the idea first described and on what date? (Other than a co-inventor.)

[redacted]

3.3 Identify the date of the first tangible record such as computer simulation, tape out, drawing or written description. Please specify type and location.

[redacted]

3.4 Identify related invention disclosures or related patents. Attach copies, if available.

None

4. INVENTOR (S):

Name: Doug Rollins **User Name:** dlrollins

Micron Phone: [redacted] **Fax:** [redacted] **e-mail:** [redacted]

Employee #: 16064 **Company #:** 12 **Dept. #:** 4100

Dept Name: Product Development

Company:
- [X] **MEI/Nampa/PC Design and Manufacture**
- [ ] **MEI Other** _____
- [ ] **SpecTek**

Canyon County

Home Address: [redacted]

County: [redacted] **Citizenship:** [redacted]

Inventor's Supervisor: Darren Call

Inventor Signature: _____ **Date:** [redacted]

*If more than one inventor, attach additional copies of this section, one for each inventor.

5. WITNESS (required for a single inventor)

If there is only one inventor, a witness should sign and date this disclosure. A witness in this case is a non-inventor who understands the nature of the invention.

_____
(Signature of Witness)

MARK PRICE
(Printed Name of Witness)

[redacted]
(Date)

Note: If you have any questions or wish assistance completing this form, please call the Legal/Patent Department, [redacted]

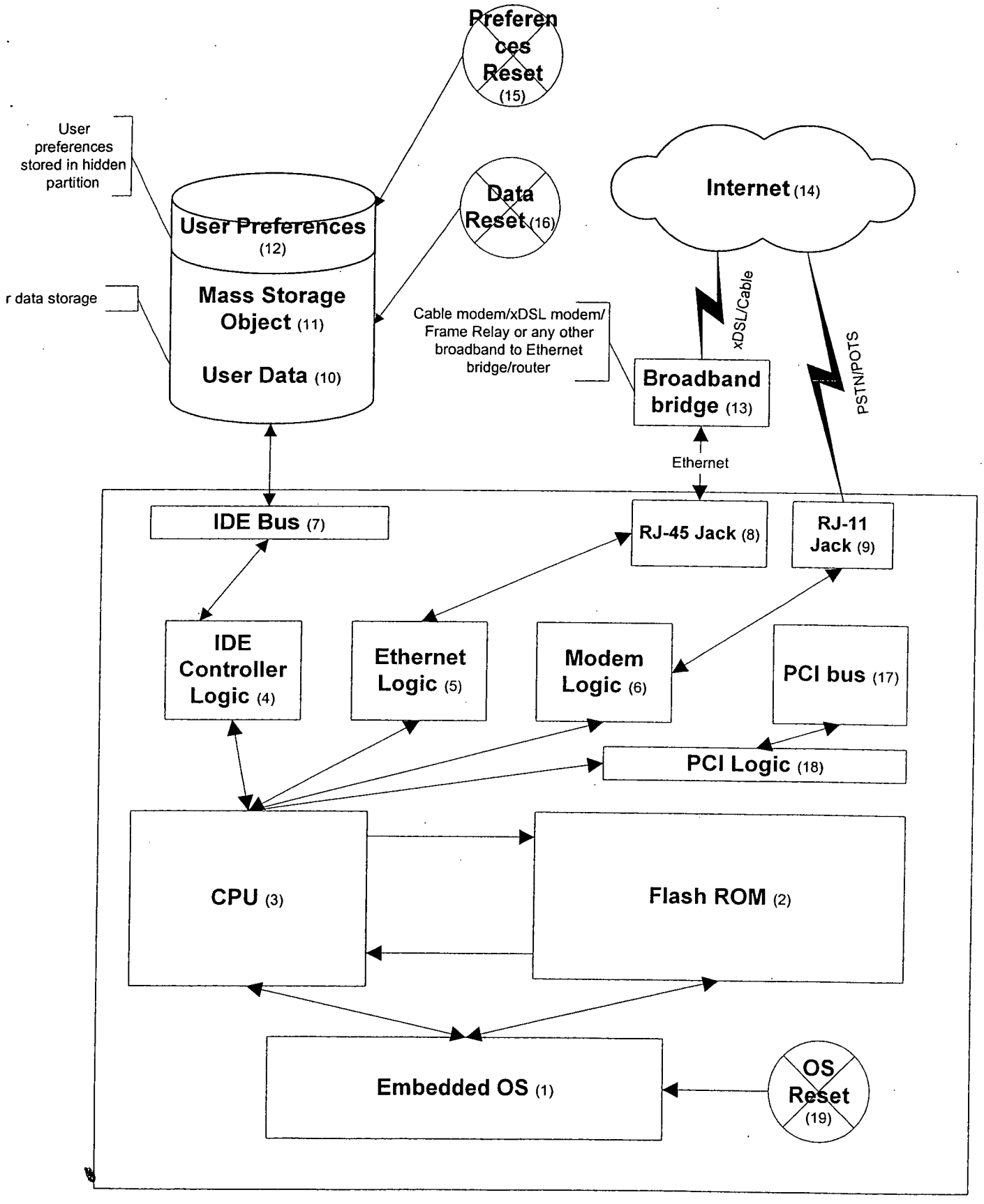

Preferences Reset (15)
User preferences stored in hidden partition
User Preferences (12)
Data Reset (16)
Internet (14)
r data storage
Mass Storage Object (11)
User Data (10)
Cable modem/xDSL modem/ Frame Relay or any other broadband to Ethernet bridge/router
xDSL/Cable
PSTN/POTS
Broadband bridge (13)
Ethernet
IDE Bus (7)
RJ-45 Jack (8)
RJ-11 Jack (9)
IDE Controller Logic (4)
Ethernet Logic (5)
Modem Logic (6)
PCI bus (17)
PCI Logic (18)
CPU (3)
Flash ROM (2)
Embedded OS (1)
OS Reset (19)

EXHIBIT
B

OIPE
MAY 3 1 2005
PATENT & TRADEMARK OFFICE

DECLARATION

As the below-named inventor, I declare that:

My residence, post office address, and citizenship are as stated below under my name.

I believe I am the original, first, and sole inventor of the invention entitled "NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY," which is described and claimed in the foregoing application, including the claims, and for which a patent is sought.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to herein (if any).

I acknowledge my duty to disclose information of which I am aware which is material to patentability and examination of this application in accordance with 37 C.F.R. § 1.56(a).

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that the making of willfully false statements and the like is punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of any patent issuing from this patent application.

Doug Rollins

Date 07/9/01

Residence : City of Nampa, County of Canyon
State of Idaho

Citizenship : United States of America

P.O. Address : 7626 Cypress Lane
Nampa, Idaho 83687

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Doug Rollins Filed : Concurrently herewith For : NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY	Docket No. 500964.01 Disclosure No. 00.03470

ASSIGNMENT:

_X_ Enclosed for recording
_____ Previously recorded
Date: _____
Reel: _____

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN AND TRANSFER to **Micron Technology, Inc.** (the "Assignee"), a corporation of Delaware, having a place of business at 8000 South Federal Way, Boise, Idaho 83716-9632, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled **"NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY"**; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States of America;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Doug Rollins

Date: 07/40/

STATE OF IDAHO)
) ss.
County of Ada)

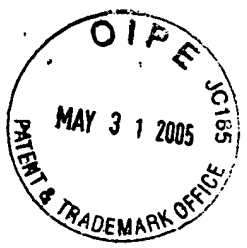
BEFORE ME, this 24th day of July, 2001, personally appeared the above-named individual, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he executed the same of his own free will for the purpose therein expressed.

SHERILYN MAXFIELD NOTARY PUBLIC STATE OF IDAHO

Notary or Consular Officer
My Commission Expires 10/21/2003

h:\ip\documents\clients\microtechnology\900\500964.01\500964.01 assignment.doc

EXHIBIT
C



EXPRESS MAIL NO. EL646072950US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Doug Rollins	Attorney Docket No.: 500964.01
Filed	: Concurrently herewith	
Title	: NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY	

Box Patent Application
Commissioner of Patents
Washington, DC 20231

ELECTION UNDER 37 C.F.R. §§ 3.71 AND 3.73(b) AND POWER OF ATTORNEY

Sir:

The undersigned, being Assignee of the entire interest in the above-identified application by virtue of an Assignment filed concurrently herewith, hereby elects, under 37 C.F.R. § 3.71, to prosecute the application to the exclusion of the inventor.

Assignee hereby appoints EDWARD W. BULCHIS, Reg. No. 26,847; PAUL T. MEIKLEJOHN, Reg. No. 26,569; GLENN P. RICKARDS, Reg. No. 29,428; DALE C. BARR, Reg. No. 40,498; KIMTON N. ENG, Reg. No. 43,605; BRIAN C. PARK, Reg. No. 45,519; MARK W. ROBERTS, Reg No. 46,160; STEVEN H. ARTERBERRY, Reg. No. 46,314; PAUL F. RUSYN, Reg No. 42,118; JOHN P. LUTHER, Reg. No. 32,261; D. C. PETER CHU, Reg. No. 41,676; and the attorneys and agents associated with the firm of **DORSEY & WHITNEY LLP, Customer Number 27,076**, along with MICHAEL L. LYNCH, Reg. No. 30,871; WALTER D. FIELDS, Reg. No. 37,130; CHARLES B. BRANTLEY, II, Reg. No. 38,086; KEVIN D. MARTIN, Reg. No. 37,882; and DAVID J. PAUL, Reg. No. 34,692, of MICRON TECHNOLOGY, INC., 8000 South Federal Way, Boise, Idaho 83716-9632, as its attorneys to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. Please direct all telephone calls to **Paul F. Rusyn** at (206) 903-8800 and telecopies to (206) 903-8820.

Please direct all communications to:

Paul F. Rusyn, Esq.
Customer No. 27,076
Dorsey & Whitney LLP
1420 Fifth Avenue, Suite 3400
Seattle, Washington 98101
(206) 903-8800

Pursuant to 37 C.F.R. § 3.73(b), the undersigned duly authorized designee of Assignee certifies that the evidentiary documents have been reviewed, specifically the Assignment to MICRON TECHNOLOGY, INC., filed concurrently herewith for recording, a copy of which is attached hereto, and certifies that to the best of my knowledge and belief, title remains in the name of the Assignee.

MICRON TECHNOLOGY, INC.
ASSIGNEE

8-3-01
DATE

Michael L. Lynch
Chief Patent Counsel

Enclosure:
Copy of Assignment

h:\ip\documents\clients\micron technology\900\500964.01\500964.01 election.doc

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Doug Rollins

Filed : Concurrently herewith

For : NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY

Docket No. 500964.01

Disclosure No. 00.03470

ASSIGNMENT:

_X_ Enclosed for recording
____ Previously recorded
Date: _____
Reel: _____

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN AND TRANSFER to **Micron Technology, Inc.** (the "Assignee"), a corporation of Delaware, having a place of business at 8000 South Federal Way, Boise, Idaho 83716-9632, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled **"NETWORK COMPUTER PROVIDING MASS STORAGE, BROADBAND ACCESS, AND OTHER ENHANCED FUNCTIONALITY"**; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States of America;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Doug Rollins

Date: 07/40/

STATE OF IDAHO)
) ss.
County of Ada)

BEFORE ME, this 24th day of July, 2001, personally appeared the above-named individual, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he executed the same of his own free will for the purpose therein expressed.

SHERILYN MAXFIELD NOTARY PUBLIC STATE OF IDAHO

Notary or Consular Officer
My Commission Expires 10/21/2007

h:\ip\documents\clients\micron technology\900\500964.01\500964.01 assignment.doc

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☑ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.